

Amendments to the Specification:

Please delete paragraph [0060], which begins with "Figs. 24A through 2638D are schematic diagrams..." and paragraph [0061], which begins with "Figs. 2639 through 3057 are schematic diagrams...".

Please replace paragraph [0116] with the following amended paragraph:

The present invention discloses 2616 novel genes of the GAM group of genes, which have been detected bioinformatically, as described hereinbelow with reference to Tables 1 and 2~~Figs. 24 through 3037~~. Laboratory confirmation of 4 genes of the GAM group of genes is described hereinbelow with reference to Figs. 21A through 23.

Please replace paragraph [0163] with the following amended paragraph:

The structure of GAM genes comprised in a GR GENE, and their mode of modulation of expression of their respective target genes is described hereinabove with reference to Fig. 8. The bioinformatic approach to detection of GAM genes comprised in a GR GENE is described hereinabove with reference to Figs. 9 through 15. The present invention discloses 147 novel genes of the GR group of genes, which have been detected bioinformatically, as described hereinbelow with reference to Tables 1 and 2~~Figs. 551 through 697~~. Laboratory confirmation of 3 genes of the GR group of genes is described hereinbelow with reference to Figs. 21A through 23.

Please replace paragraph [0176] with the following amended paragraph:

The present invention discloses a first plurality of novel genes referred to here as GAM genes, and a second plurality of operon-like genes referred to here as GR genes, each of the GR genes encoding a plurality of GAM genes. The present invention further discloses a very large number of known target-genes, which are bound by, and the expression of which is modulated by each of the novel genes of the present invention. Published scientific data referenced by the present invention provides specific, substantial, and credible evidence that the abovementioned target genes modulated by novel genes of the present invention, are associated with various diseases. Specific novel genes of the present invention, target genes thereof and diseases associated therewith, are described hereinbelow with reference to Tables 1 and 2~~Figs. 24 through 27260~~. It is therefore appreciated that a function of GAM genes and GR genes of the present invention is modulation of expression of target genes related to known diseases, and that therefore utilities of novel genes of the present invention include diagnosis and treatment of the abovementioned diseases. Fig. 19 describes various types of diagnostic and therapeutic utilities of novel genes of the present invention.